

ICC 815 Sizing Water Distribution, Drainage and Venting Standard Consensus Committee (IS-SWDDV)

Meeting 23 - Minutes

January 21, 2025

Chair: Gary Klein

Vice Chair: Philip Parisi

Secretariat- Ramiro Mata

Meeting 23 of the ICC 815 Sizing Water Distribution, Drainage and Venting Standard Consensus Committee (IS-SWDDV) was held virtually on January 21, 2025. The meeting was conducted in accordance with ICC’s Consensus Procedures. https://www.iccsafe.org/wp-content/uploads/ICC-Consensus-Procedures-ANSI-approved-8_2_21-BOD-apprvd-8_27_21.pdf

1. Welcome – Vice Chairman, Philip Parisi, convened the meeting and welcomed attendees at 1:08pm Pacific time along with Staff Secretariat, Ramiro Mata. Mata reminded attendees about the ICC Code of Ethics and the Anti-Trust Policy, both of which can be found on the ICC 815 (IS-SWDDV) webpage.
2. Roll Call – Klein called the meeting to order with a roll call of ICC 815 (IS-SWDDV) committee members – Symbol indicates present, indicates absent.

Committee Members

Regulator		User		Manufacturer		Builder	
<input type="checkbox"/>	Jim Richardson	<input checked="" type="checkbox"/>	Esber Andiroglu PhD, PE	<input checked="" type="checkbox"/>	Marcus Elmer	<input checked="" type="checkbox"/>	Dan Buuck
<input checked="" type="checkbox"/>	Richard Grace	<input type="checkbox"/>	Gary Klein	<input type="checkbox"/>	Dave Parney		
<input checked="" type="checkbox"/>	Terry Haughn	<input checked="" type="checkbox"/>	John Lansing	<input checked="" type="checkbox"/>	Lance MacNevin PE	Consumer	
<input checked="" type="checkbox"/>	Ross Wakefield	<input checked="" type="checkbox"/>	Philip Parisi Jr. PE	<input type="checkbox"/>	Kyle Thompson PE	<input checked="" type="checkbox"/>	Tim Keane
		<input type="checkbox"/>	Tom Wise			SDO/Test Lab	
						<input checked="" type="checkbox"/>	Kathryn (Katie) Foster

ICC Staff – Tom Roberts

Interested Parties and Guests – Drew Rich, Frank Schmidt, Dan Cole, Nhat Nguyen, Rich Houle, Mary Kimlinger, Natascha Milesi-Ferretti, David Nickelson, Adam Smith, Lavanya Muttayan, Mike Cudahy, Bob Carpenter, Carla Martinez

3. Quorum and Membership Review - With eleven committee members in attendance, Mata announced the threshold for quorum was met.
4. Approval of meeting minutes from December 9, 2024 – Motion by Lansing, seconded by MacNevin. Motion carried.
5. Approval of January 21, 2025 Meeting Agenda – Motion by MacNevin, seconded Lansing. Motion carried.
6. German Pipe Sizing Methodology Presentation – Schmidt

- a. Frank Schmidt gave a detailed presentation on the German pipe sizing method based on European standard EN 806 Part 3, with Germany using a national appendix DIN 1988 Part 300 for a more differentiated approach.
 - b. Key design requirements include minimizing water content and pipe surface area, maintaining hot water temperatures above 55°C (131°F), and ensuring cold water reaches 25°C (77°F) or below within 30 seconds of opening a fixture.
 - c. The design process involves defining flow paths, determining design flow rates for fixtures, calculating total flow rates for pipe sections, and using conversion curves to determine peak flow rates based on building type.
 - d. Available pressure is calculated by subtracting required fixture pressure, geodetic pressure, and component pressure drops from the supply pressure.
 - e. Pipe sizing is based on the available pressure gradient and peak flow rate, with velocity limits (generally below 5 m/s) also considered.
 - f. The method aims for a slim, reasonably branched system with low water content, using manufacturer-specific data for detailed calculations.
 - g. A lengthy discussion ensued after the presentation on topics such as pipe materials, with a trend towards multilayer pipes in residential settings, pressure loss calculations, and velocity considerations.
7. Working Groups – Meeting Updates and Work Plans
- a. Measurement – Lansing
 - i. Efforts are ongoing to secure buildings in Portland for measurement studies.
 - ii. Parisi is in the process of securing a building in New York City to collect data from existing measurement instruments.
 - b. DWV – Lansing
 - i. The drain waste and vent group discussed failure modes in sanitary drainage systems, including flow failures due to blockages from low flow and pressure failures due to high flows or unfavorable junctions.
 - ii. There are significant differences in drain sizing allowances between various international standards.
 - iii. Current installation guidance generally prevents overloading of sanitary drains, but pressure failures at connections and junctions are more common.
 - c. Water Service – WG Chair, Tom Wise, was not present but has scheduled a working group meeting in February.
 - d. IEP – WG Chair, Lance MacNevin, had to leave the meeting early. Mata reported that ICC's IT Dept. has approved moving forward with the database creation.
8. Project Planning
- a. Mata presented several planning documents, including a Gantt chart outlining the timeline for working group activities, draft development, and the standards approval process.
 - b. A project plan showing the potential structure of the final standard document was shared.
9. Discussion Items
- a. Project Scope – The committee was tasked with drafting the initial scope which will be discussed at the next meeting.

- b. Definition of Failure – Chair and Vice Chair requested for the committee members and guests to review the potential failure modes.
 - i. Suggestion was made to add noise, vibration, water hammer and odor to the list.
 - ii. Flow failure in drain side – might be because of insufficient water in the drain or too much water resulting negative pressure which may lose trap seals.
 - iii. Unsteady flow on the supply side when other fixtures are in use.
10. Research Update – Rich
- a. Reported that Carla Martinez is supporting data collection, analysis and next steps.
 - b. Presented an open-source data set to determine fixture frequency of use, volume and duration. Data is intended to be used for modeling.
 - c. Used low resolution water consumption data develop a paper on peak demand. Waiting on feedback. Same analysis will be used for data from Ireland.
 - d. With assistance from Tom Roberts, met with Australian group to access data.
 - e. Also plan to compare data to see if there are variations of use from one country to another
11. Previous Action Items
- a. Submit Working Group Goals – WG Chairs – In progress
 - b. Develop draft of scope - ALL – In progress
 - c. Schedule Water Service WG meeting in late January or early February – Mata - Completed
 - d. Schedule DWV WG meeting in early January – Mata – Completed
12. New Action Items
- a. Develop initial draft of scope – **Committee Members and Interested Parties**
 - b. Follow up with Phil Parisi regarding initial data collection at SVEN building in New York City – **Mata**
 - c. Review potential failure modes and revise if needed - **Committee Members and Interested Parties**
 - d. Assist Lansing to schedule next meetings for Measurement and DWV working groups - **Mata**
13. New Business
14. Old Business
15. Next Meeting – February 18, 202, at 2pm-4:30pm Eastern. Virtual format.
16. Adjournment – Motion to adjourn by Lansing, seconded by Grace. Motion carried. Meeting adjourned at 3:53pm EST (12:53pm PST)